WEST

Help | Logout | Interrupt

Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases

Search Results -

Terms	Documents
L6 and (basic or alkaline or hydroxyl)	5

Database: US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L7

Refine Search

Recall Text | Clear

Search History

DATE: Wednesday, December 18, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; PLUR=YES; OP=ADJ		
L7	L6 and (basic or alkaline or hydroxyl)	5	L7
L6	l5 and l4	5	L6
L5	('6455132'| '6196129'| '6427597'| '5738013'| '5501150')[PN]	5	L5
L4	L3 and (jet$ or drop) same (basic or alkaline or hydroxyl)	35	L4
L3	L2 or l1	3755	L3
L2	(430/302 OR 430/306).CCLS.	2140	L2
L1	((101/453 |101/454 |101/455 |101/456 |101/457 |101/458 |101/459 |101/460 |101/461 |101/462 |101/463.1 |101/464 |101/465 |101/466 |101/467)!.CCLS.)	2201	L1

END OF SEARCH HISTORY

Current US Cross Reference Classification (3):
101/465

Current US Cross Reference Classification (4):
101/466

CLAIMS:

29. A method for preparing a printable media comprising: (a) imagewise applying a fluid composition onto a substrate having at least one basic surface by means of an ink jet printing apparatus, wherein said fluid composition contains a copolymer having a plurality of tertiary amine sites, said amine sites being at least partially neutralized with an acid, and (b) drying said fluid composition.

30. The method of claim 29, wherein said basic surface of said substrate has been roughened prior to being rendered basic.

31. The method of claim 30, wherein the roughened surface of said substrate is rendered basic by treating it with sodium silicate.

☐ 2. Document ID: US 6427597 B1

L7: Entry 2 of 5 File: USPT Aug 6, 2002

DOCUMENT-IDENTIFIER: US 6427597 B1
TITLE: Method of controlling image resolution on a substrate

US PATENT NO. (1):
6427597

Detailed Description Text (7):
In a preferred embodiment of the invention the polymerizable component is a cationic polymerizable system comprising one or more mono-functional or multi functional epoxides. Cationically polymerizable groups include epoxides, vinyl ethers, alkoxy styrenes and combinations thereof. The fluid composition typically includes at least one cycloaliphatic epoxide. Examples of such cycloaliphatic epoxides include adducts of epoxides and hydroxyl components such as glycols, polyols, or vinyl ether, such as 3,4-epoxycyclohexylmethyl 3,4-epoxy-cyclohexane carboxylate; bis (3,4-epoxy-cyclohexyl-methyl)adipate; limonene monoepoxide; limonene diepoxide; 1-vinyl-3,4-epoxycyclohexane; epoxidized dicyclopentyl alcohol; and mixtures thereof. Preferred cycloaliphatic epoxides of this type include 3,4-epoxycyclohexylmethyl 3,4-epoxy-cyclo-hexylcarboxylate which is commercially available under the trade name CYRACURE 6105 from Union Carbide Corporation and 1,3-bis(2-(7-oxabicyclo(4.1. 0)hepta-3-yl)ethyl)-1,1,3,3-tetramethyldisiloxane.

Detailed Description Text (25):
The printing plate substrate may be subjected to known treatments, such as electrograining, anodization, and silication, to enhance its surface characteristics. The printing plate surface may carry a plurality of basic sites, such as sodium silicate groups. Alternatively, the printing plate substrate surface may carry a plurality of acidic sites, such as sulfuric acid groups, phosphonic acid groups and acrylic acid groups, or the surface may be amphoteric.

Detailed Description Text (28):
"EG" means "electrolytic graining." The aluminum surface is first degreased, etched and subjected to a desmut step (removal of reaction products of aluminum and the etchant). The plate substrate is then electrolytically grained using an AC current of 30-60

A/cm.sup.2 in a hydrochloric acid solution (10 g/liter) for 30 seconds at 25.degree. C., followed by a post-etching alkaline wash and a desmut step. The grained plate substrate is then anodized using DC current of about 8 A/cm.sup.2 for 30 seconds in a H.sub.2 SO.sub.4 solution (280 g/liter) at 30.degree. C.

Detailed Description Text (34):
"CHB" means chemical graining in a basic solution. After an aluminum substrate is subjected to a matte finishing process, a solution of 50 to 100 g/liter NaOH is used during graining at 50 to 70.degree. C. for 1 minute. The grained plate is then anodized using DC current of about 8 A/cm.sup.2 for 30 seconds in an H.sub.2 SO.sub.4 solution (280 g/liter) at 30.degree. C. The anodized plate substrate is then coated with a silicated interlayer.

Detailed Description Text (35):
Those of ordinary skill in the art will understand that the "basic" and acidic" descriptions of the surface chemistry of the printing plate substrates summarized above are relative terms. Thus, a "basic" surface will have a plurality of basic sites and acidic sites present, with the basic sites predominating to some degree. Similarly, an "acidic" surface will have a plurality of acidic sites and basic sites present, with the acidic sites predominating to some degree. The PG-silicated printing plate substrate appears to have a higher silicate site density than the double-sided printing plate substrate, and is more basic. The G20 printing plate substrate exhibits less acidic behavior than anodized only ("AA") printing plate substrates.

Detailed Description Text (37):
Without intending to be bound by any one theory, it is believed that the magnitude of the increase in viscosity of the fluid composition between the jetting temperature, for example about or greater than 120.degree. C., and the temperature of the substrate, for example about 25.degree. C., prevents the spreading of droplets of the fluid. It is also believed that, in embodiments of this invention including the use of DTMP, a compound which has a plurality of OH units, the DTMP enables establishment of a gel structure on the surface of the substrate as the ink composition cools subsequent to the jetting application to the substrate and facilitates hydrogen bonding gelling behavior due to the hydroxyl groups, and thus mitigates against dot spreading. Such hydrogen bonding is believed to occur immediately upon impact of the fluid composition upon the cooler substrate surface, even though this involves a very short time scale.

Detailed Description Paragraph Table (1):
TABLE 1 Substrate Interlayer Surface Refs. Surface Treatment Treatment Property AA Quartz Grained None Acidic and Anodized EG-PVPA Electrograined Polyvinyl Acidic and Anodized phosphonic acid EG-Sil Electrograined Sodium Silicate Basic and Anodized G20 Electrograined Vinylphosphonic Acidic and Anodized acid/acrylamide coplymer DS-Sil Chemically Grained Sodium Silicate Basic and Anodized PG-Sil Pumice Grained Sodium Silicate Basic and Anodized CHB-Sil Chemically Grained, Sodium Silicate Basic Anodized and Silicated

Current US Original Classification (1):
101/465

Current US Cross Reference Classification (1):
101/457

Current US Cross Reference Classification (2):
101/462

☐ 3. Document ID: US 6196129 B1

L7: Entry 3 of 5 File: USPT Mar 6, 2001

DOCUMENT-IDENTIFIER: US 6196129 B1

TITLE: Wet lithographic printing plates

US PATENT NO. (1):
6196129

Detailed Description Text (14):
The supports for the positive working, wet lithographic printing plates of this invention comprise a support that bears a hydrophilic layer. As described herein, the hydrophilic layer may be an integral part of the support such as, for example, a hydrophilic surface of a metal support; may be a layer in contact to the support; or may be an intermediate layer interposed between the ink-accepting surface layer and the support with one or more additional layers between the hydrophilic layer and the support and/or between the hydrophilic layer and the ink-accepting surface layer. A wide variety of hydrophilic layers may be utilized with the supports. Requirements for the hydrophilic receiving layer include generally, for example, that the hydrophilic layer is receptive to the application of the fluid material on the hydrophilic layers in terms of wettability and other desired coatability properties such as coating uniformity; that interaction with the reactive component in the fluid material provides a durable, strongly adhering ink-accepting layer; and that the ink-repelling properties needed for high quality wet lithographic printing are provided if the hydrophilic layer is the desired ink-repelling area in the imaged wet lithographic plates. Since the fluid material in this invention comprises a reactive component which reacts, for example, after application of the fluid material on the hydrophilic layer to form an ink-accepting layer, it is often desirable that one or more hydrophilic materials in the hydrophilic layer have reactivity with the reactive component to further enhance the durability, adhesion, and permanence of the reaction products of the reactive component. For example, some hydrophilic materials obtain some or all of their hydrophilic properties from hydroxyl groups, and these hydroxyl groups may also react with the transition metal complexes of organic acids of the fluid materials of this invention after application of the fluid material on the hydrophilic layer, thereby forming a more durable ink-accepting layer on the hydrophilic layer. A hydrophilic layer is also beneficial for the application of the typically polar, and often aqueous-based, fluid materials of this invention.

Detailed Description Text (16):
To promote the reaction of the reactive component after application of the fluid material on the hydrophilic or other receiving layer of the wet lithographic printing plates of the present invention, the hydrophilic or other receiving layer may further comprise a catalyst. Preferably, the catalyst is an alkaline material such as, for example, a tertiary amine. The fluid materials of this invention, which comprise transition metal complexes of organic acids, are typically acidic, and alkaline materials in the hydrophilic or other receiving layer generally promote the reaction of these transition metal complexes.

Detailed Description Text (59):
Although the supports for the media of this invention can be selected from a wide range of materials commonly used in lithographic printing plates with a basic requirement that the media with this support be capable of transport through the ink jet printing hardware where the media is required to be transported, the preferred supports are paper, plastic polymer film, or aluminum.

Detailed Description Text (62):
In another preferred embodiment, the receiving layer of the media also comprises a catalyst to increase the rate of reaction of the reactive component after printing and upon exposure to the external energy source or other suitable means to cause reaction. In a most preferred embodiment, the catalyst that is added to the receiving layer is an alkaline material. Some of the reactive components react under alkaline conditions, but are stable in acidic conditions. Thus, these reactive components must be in the ink jet fluid of the present invention in an acidic environment, but require the presence of an alkaline material in the receiving layer to cause the desired reactivity.

Current US Original Classification (1):
101/467

Current US Cross Reference Classification (1):
101/454

Current US Cross Reference Classification (2):

101/460

Current US Cross Reference Classification (3):
101/465

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 4. Document ID: US 5738013 A

L7: Entry 4 of 5 File: USPT Apr 14, 1998

DOCUMENT-IDENTIFIER: US 5738013 A
TITLE: Method of making a lithographic printing plate with an ink jet fluid material

US PATENT NO. (1):
5738013

Brief Summary Text (35):
Although the supports for the media of this invention can be selected from a wide range of materials commonly used in lithographic printing plates with a basic requirement that the media with this support be capable of transport through the ink jet printing hardware where the media is required to be transported, the preferred supports are paper, plastic polymer film, or aluminum.

Brief Summary Text (38):
In another preferred embodiment, the receiving layer of the media also comprises a catalyst to increase the rate of reaction of the reactive component after printing and upon exposure to the external energy source or other suitable means to cause reaction. In a most preferred embodiment, the catalyst that is added to the receiving layer is an alkaline material. Some of the reactive components react under alkaline conditions, but are stable in acidic conditions. Thus, these reactive components must be in the ink jet fluid of the present invention in an acidic environment, but require the presence of an alkaline material in the receiving layer to cause the desired reactivity.

Current US Original Classification (1):
101/463.1

Current US Cross Reference Classification (1):
101/467

Current US Cross Reference Classification (3):
430/302

CLAIMS:

10. The media/ink jet fluid marking material set of claim 9 wherein said catalyst is an alkaline material.

27. The method of claim 25, wherein said catalyst is an alkaline material.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 5. Document ID: US 5501150 A